

Application No.: 09/185208

Case No.: 54537US003

**REMARKS****BEST AVAILABLE COPY**

Claims 1, 2 and 4 to 10 are pending.

**§ 112 Rejections**

Claims 1, 2 and 4-10 stand rejected under 35 USC § 112, 1<sup>st</sup> paragraph, as failing to comply with the written description requirement. The office action states the following:

the phrase the "average particle diameter of the particulate is at least about 1 micron" is found to be new matter in the absence of any support for it in the specification. The specification recites in page 2 that the particle diameter is in the range of 1 to 10 micrometers. However, the invention as claimed refers to a diameter of 'at least 1 micron' which supports the lower end of the disclosed range but the upper end of the claimed range is not supported by the specification.

Applicants stated on page 2, lines 3-7 that "LABs used . . . contain at least one particulate filler, . . . and the diameter of the particles is in the range of the topographical features of the textured film and thickness of the LAB and such diameter is typically in the range of 1 to 10 micrometers."

What Applicant states is that the particle diameter is in the range of the topographical feature of the textured film. In one embodiment, Applicant exemplified that the diameter is "typically" in the range of 1 to 10 micrometers. If the textured film has large peaks and valleys, then the particle diameter should be of comparable size to those peaks and valleys. One skilled in the art can resort to various known analytical methods to determine the surface topography and thus can determine the appropriate particle size for the particulate fillers. Thus, one skilled in the art reading Applicants' disclosure would understand that the inventors had possession of the claimed invention at the time they filed the application.

In summary, Applicants submit that the rejection of claims 1, 2 and 4-10 under 35 USC § 112, 1<sup>st</sup> paragraph, has been overcome, and that the rejection should be withdrawn.

**§ 103 Rejections**

Claims 1, 2 and 4-10 stands rejected under 35 USC § 103(a) as being unpatentable over Butler et al. (USP 5,928,726) in view of Zhu (USP 5,608,003).

Application No.: 09/185208

Case No.: 54537USD

Butler discloses a method for pattern coating thin to ultra-thin liquid films onto substrates.<sup>1</sup> In very brief summary, Butler's method comprises the steps of: (a) dispensing a composite comprising a carrier fluid layer and a functional fluid layer, (b) bringing the composite into contact with a substrate, (c) transferring the composite to the substrate, wherein interfacial interaction among the carrier fluid layer, the functional fluid layer, and the substrate generates a patterned coating of the functional layer on the substrate.<sup>2</sup> The coating methods can be used to provide glossy smooth coatings, translucent patterned coatings, or porous coatings.<sup>3</sup>

Zhu discloses a water-based composition comprising, among other components, colloidal silica. In one embodiment, the composition comprises colloidal silica having an average particle diameter of at least about 5 nanometers.<sup>4</sup> Zhu stated that the purpose of adding colloidal silica is to provide abrasion resistance to the coating without adversely affecting the low surface energy properties.<sup>5</sup> Zhu further disclosed that "the useful particle size [of the colloidal silica] . . . ranges from about 1 nanometer to about 1 micrometer, preferably, at least about 5 nanometers, more preferably from about 20 to about 75 nm. The use of particles larger than 75 nm may result in the crosslinked coating becoming translucent or even opaque, in contrast to the use of particle sizes in the preferred range which result typically in transparent coatings. The use of larger particle sizes . . . will not diminish the low surface energy properties of the coating, and will impart improved abrasion resistance."<sup>6</sup>

Applicants submit that one skilled in the art familiar with the disclosures of Butler and Zhu would not have used Zhu to modify Butler to arrive at Applicants' invention for the following reasons. First, Butler teaches pattern coating of a specific composite system, one that contains a carrier fluid layer and a functional fluid layer and where the functional fluid layer remains as the pattern coated material. Zhu discloses that use of the colloidal silica particles increases the abrasion resistance of his water-based composition. While Zhu states that particle size of 1 micron may be useful, he clearly states that particles of larger than 75 nm can cause the coating to become translucent or even opaque. If one skilled in the art were to combine Butler

<sup>1</sup> See USP 5,928,726 at column 1, lines 55-56

<sup>2</sup> *Id.* at column 2, lines 36-44

<sup>3</sup> *Id.* at column 2, lines 46-48

<sup>4</sup> See USP 5,608,003 at column 1, lines 57-58.

<sup>5</sup> *Id.* at column 1, lines 12-15

Application No.: 09/185208

Case No.: 54537US003

with Zhu, one would do so in an effort to increase the abrasion resistance of the Butler coating and one would be wary to try a particle size greater than 75 nm because while particle size between 75 nm and 1 micron imparts abrasion resistance to the coating, it may affect the visual appearance of the coating.

Applicants' invention, on the other hand, solves a very different problem. Applicants' invention focused on a "visibly uniform" pattern coated LAB where there exist coated and uncoated regions on the textured film backing. The problem, as Applicants stated on page 3, lines 6-16 is as follows: "Pattern coating . . . allows differential release. Pattern-coated articles tend to have a uniform appearance when the tape film backing is a smooth film. Once the tape film backing selected is a textured film, the coated areas of the pattern coating has the effect of masking the texture and giving a visual impression of a smooth surface. However, the uncoated portion of the pattern coating remains unaffected and gives the visual impression of the textured surface, which are typically a matte (dull) appearance, rather than a glossy (shiny) appearance. The present invention provides for a means to make a pattern-coated textured film appear uniform across the width of the film, that is the coated and uncoated areas appear to have a matte finish."

In solving the problem, Applicants used particulate fillers that have a diameter in the range of the topographical features of the textured film. Applicants also found that the textured film appear uniform when the particulate filler diameter is greater than the thickness of the LAB coating layer. Neither the Butler nor the Zhu references, taken alone or in combination, suggest that particulate fillers of the size of the topography of the textured film and particulate fillers having a diameter greater than the thickness of the LAB coating layer will provide a visibly uniform film. As stated, Zhu is primarily concerned with abrasion resistance and Butler et al. is primarily concerned with pattern coating a specific composite system.

The rejection of claims 1, 2 and 4-10 under 35 USC § 103(a) as being unpatentable over Butler et al. in view of Zhu has been overcome and should be withdrawn.

---

<sup>6</sup> *Id.* at column 4, lines 23-33

Application No.: 09/185208

Case No.: 54537US003

Claims 5, 6 and 9 stands rejected under 35 USC § 103(a) as being unpatentable over Butler et al. in view of Zhu and further in view of Blackwell et al.(USP 5,401,547).

Blackwell does not cure the deficiencies of Butler and Zhu as Blackwell et al. provides a stack of pre-cut sheets disposed one on top of another. Each sheet has a backing having first and second opposite major side surfaces. A layer of adhesive is permanently adhered to the first side surface of the backing, the layer of adhesive of each sheet being releasably adhered along the second surface of the adjacent (lower) sheet in the stack.<sup>7</sup> Thus, one skilled in the art, familiar with Blackwell, Zhu and Butler could not use Blackwell to modify either the Zhu or Butler reference to arrive at Applicants' invention as Blackwell is silent on the use of particulate fillers with LABs to create a visibly uniform coating.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Respectfully submitted,

28 February 2005  
Date

By: Yen Tong Florczak  
Yen Tong Florczak, Reg. No.: 45,163  
Telephone No.: (651) 737-0710

Office of Intellectual Property Counsel  
3M Innovative Properties Company  
Facsimile No.: 651-736-3833

<sup>7</sup> See USP 5,401,547 at column 2, lines 41-50

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**